



Department of Automatic Control & Systems Engineering
would like to announce the following seminar:

Active Sound Control in Aircraft Cabins and in the Ear

***Speaker:* Professor Steve Elliott**

**Director, Institute of Sound and Vibration Research (ISVR)
University of Southampton**

**Wednesday 6 May 2009
at 14:10**

Location: St Georges Mappin Building LT2

Tea and Biscuits will be served afterwards.

ABSTRACT

In this talk several aspects of the research work in the ISVR will be briefly reviewed, including active sound control in the cabins of propeller aircraft and “electrical hearing” via cochlear implants. Recent developments will then be discussed on modelling the active process within the ear that provides us with the exquisite sensitivity and selectivity of our hearing. This is driven by 12,000 outer hair cells that each act as sensors, actuators and local feedback control loops and amplify the wave propagating along the cochlea. A recently developed state space formulation is used to predict the stability of this distributed active system and simulate its nonlinear behaviour.